

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332928-930

Luminaire Tested: **SA4XXRDIP-C795D365U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332928-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C795D365U930-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3809.5 lumens  
Efficiency: N/A  
Efficacy: 108.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Direct

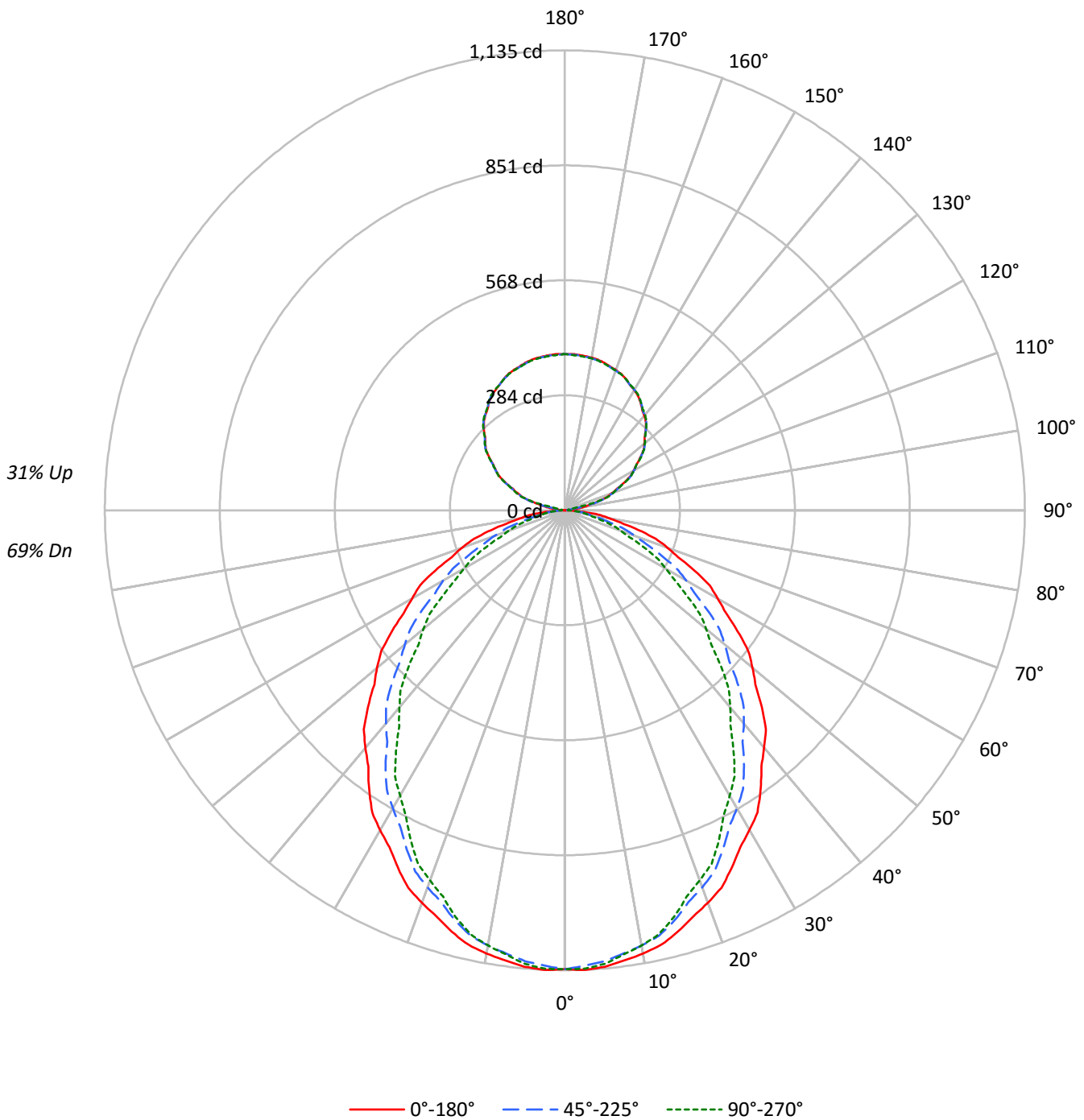
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									20									20
RC	80									50									30									10									0									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69																												
1	102	98	94	91	97	93	89	86	83	80	78	74	72	70	65	64	63	59																												
2	94	86	80	75	88	82	76	71	73	69	65	65	62	59	58	56	53	50																												
3	86	76	69	63	81	72	66	60	65	60	55	58	54	50	52	49	46	42																												
4	79	68	60	53	74	64	57	51	58	52	47	52	47	44	46	43	40	37																												
5	72	60	52	46	68	58	50	45	52	46	41	47	42	38	42	38	35	32																												
6	67	54	46	40	63	52	44	39	47	41	36	43	37	34	38	34	31	28																												
7	62	49	41	36	58	47	40	34	43	37	32	39	34	30	35	31	28	25																												
8	58	45	37	32	54	43	36	31	39	33	29	36	31	27	32	28	25	23																												
9	54	41	34	29	51	40	32	28	36	30	26	33	28	24	30	26	23	21																												
10	50	38	31	26	48	36	30	25	33	28	24	30	26	22	28	24	21	19																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9143	9143	9143
5°	9164	9052	9108
10°	9107	8943	8943
15°	9002	8756	8690
20°	8858	8508	8352
25°	8675	8219	8011
30°	8496	7914	7582
35°	8298	7597	7154
40°	8061	7238	6690
45°	7841	6882	6218
50°	7592	6469	5718
55°	7323	6042	5175
60°	7030	5572	4621
65°	6758	4988	4076
70°	6366	4338	3460
75°	5870	3599	2813
80°	5119	2738	2580
85°	4335	2492	2325



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.4	2.8
10°-20°	296.7	7.8
20°-30°	428.4	11.2
30°-40°	485.6	12.7
40°-50°	468.9	12.3
50°-60°	389.9	10.2
60°-70°	269.3	7.1
70°-80°	136.5	3.6
80°-90°	36.1	0.9
90°-100°	13.2	0.3
100°-110°	84.0	2.2
110°-120°	160.7	4.2
120°-130°	204.0	5.4
130°-140°	218.3	5.7
140°-150°	204.1	5.4
150°-160°	164.6	4.3
160°-170°	106.2	2.8
170°-180°	36.6	1.0
0°-30°	831.5	21.8
0°-40°	1317.1	34.6
0°-60°	2176.0	57.1
0°-90°	2617.8	68.7
90°-120°	257.9	6.8
90°-150°	884.3	23.2
90°-180°	1192.0	31.3
0°-180°	3809.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1131	1127	1117	1125	1124	107
15°	1077	1069	1048	1046	1040	303
25°	974	957	923	908	899	449
35°	842	813	771	742	726	526
45°	687	654	603	562	545	529
55°	520	484	429	386	368	465
65°	354	316	261	225	213	349
75°	188	156	115	96	90	199
85°	47	30	27	25	25	53
90°	1	4	6	8	9	3
95°	16	7	6	8	8	20
105°	87	88	90	92	82	91
115°	162	163	162	163	163	159
125°	228	229	228	229	229	203
135°	282	282	283	284	284	217
145°	326	326	326	327	327	203
155°	357	357	356	357	357	165
165°	377	375	375	377	375	106
175°	385	384	384	386	383	37
180°	385	385	385	385	385	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1135.4	1134.7	1134.1	1133.5	1132.9	1131.7	1130.0	1128.4	1126.7	1124.9	1126.7
5°	1130.8	1130.1	1129.3	1128.5	1127.7	1126.3	1123.9	1121.6	1119.2	1117.0	1118.9
7.5°	1120.6	1119.8	1119.0	1118.2	1117.4	1115.5	1112.5	1109.5	1106.4	1103.4	1104.6
10°	1110.9	1109.9	1109.0	1108.0	1107.0	1104.8	1101.4	1097.9	1094.5	1091.0	1091.7
12.5°	1098.4	1097.3	1096.2	1095.0	1094.0	1091.4	1087.3	1083.1	1079.0	1075.0	1075.5
15°	1077.1	1075.4	1073.6	1071.9	1070.2	1066.9	1062.0	1057.2	1052.4	1047.6	1047.2
17.5°	1051.2	1048.7	1046.2	1043.7	1041.2	1037.1	1031.3	1025.5	1019.7	1013.9	1012.8
20°	1031.1	1028.6	1026.1	1023.6	1021.1	1016.6	1010.0	1003.5	996.9	990.3	988.8
22.5°	1008.9	1006.1	1003.3	1000.5	997.7	992.7	985.7	978.7	971.7	964.7	962.4
25°	973.9	970.4	966.9	963.4	960.0	954.3	946.4	938.5	930.6	922.7	919.4
27.5°	937.1	932.8	928.4	924.1	919.7	913.3	904.8	896.4	887.9	879.5	875.5
30°	911.4	906.6	901.8	897.0	892.2	885.3	876.2	867.2	858.0	849.0	844.2
32.5°	884.4	879.0	873.5	868.0	862.7	855.2	845.9	836.5	827.1	817.7	812.2
35°	842.0	835.9	829.7	823.5	817.4	809.5	799.9	790.2	780.6	770.9	764.4
37.5°	796.8	790.4	784.1	777.7	771.4	762.9	752.2	741.5	730.8	720.2	712.8
40°	764.9	758.6	752.2	745.8	739.5	730.8	719.7	708.8	697.8	686.8	678.7
42.5°	734.3	727.7	721.1	714.4	707.7	698.6	687.2	675.7	664.3	652.8	644.6
45°	686.8	679.7	672.5	665.4	658.3	649.0	637.4	625.8	614.2	602.8	593.3
47.5°	637.7	630.4	623.1	615.6	608.3	598.6	586.6	574.5	562.6	550.5	540.7
50°	604.5	597.0	589.4	581.9	574.4	564.4	552.1	539.8	527.4	515.1	505.5
52.5°	570.5	563.1	555.7	548.4	541.0	531.0	518.4	505.7	493.1	480.5	470.7
55°	520.3	512.6	504.9	497.2	489.5	479.4	466.8	454.3	441.8	429.3	419.2
57.5°	470.8	462.7	454.7	446.7	438.6	428.4	416.1	403.8	391.5	379.1	369.0
60°	435.4	427.6	420.0	412.2	404.5	394.5	382.1	369.8	357.5	345.1	335.1
62.5°	403.4	395.4	387.4	379.4	371.4	361.0	348.4	335.7	323.1	310.5	301.2
65°	353.8	345.5	337.2	329.0	320.7	310.4	298.0	285.7	273.4	261.1	252.7
67.5°	302.3	294.4	286.4	278.5	270.5	260.9	249.4	238.0	226.5	215.1	207.9
70°	269.7	261.6	253.5	245.4	237.3	227.8	216.8	205.8	194.9	183.8	177.5
72.5°	235.1	227.7	220.4	213.0	205.7	196.9	186.5	176.1	165.8	155.4	149.9
75°	188.2	181.1	173.9	166.8	159.6	151.6	142.5	133.5	124.4	115.4	110.9
77.5°	140.6	134.6	128.6	122.5	116.4	109.7	102.5	95.1	87.8	80.5	77.9
80°	110.1	104.5	99.0	93.4	87.8	82.1	76.3	70.5	64.7	58.9	58.4
82.5°	83.8	78.7	73.5	68.4	63.3	59.0	55.8	52.4	49.1	45.8	45.3
85°	46.8	43.0	39.1	35.3	31.4	29.2	28.6	28.0	27.5	26.9	26.5
87.5°	16.1	15.0	13.9	12.9	11.7	11.2	11.2	11.1	11.0	11.0	10.9
90°	0.9	1.5	2.3	3.0	3.7	4.3	4.8	5.3	5.8	6.4	6.7
92.5°	3.7	3.7	3.7	3.8	3.8	4.1	4.6	5.1	5.6	6.1	6.5
95°	15.8	13.7	11.5	9.3	7.2	6.1	6.1	6.2	6.3	6.4	6.7
97.5°	33.7	35.0	36.4	37.7	39.1	36.2	29.0	21.9	14.8	7.6	7.7
100°	47.3	48.4	49.6	50.7	51.9	48.0	39.2	30.3	21.5	12.7	11.6
102.5°	62.5	63.3	64.2	65.0	65.9	65.7	64.6	63.4	62.2	61.1	49.3
105°	86.7	87.1	87.5	87.9	88.3	88.6	88.9	89.3	89.6	89.9	90.5
107.5°	109.3	109.4	109.7	109.8	110.1	110.3	110.8	111.2	111.6	112.1	112.3
110°	124.5	124.7	124.8	125.1	125.2	125.6	125.9	126.3	126.7	127.1	127.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	139.3	139.6	139.9	140.2	140.6	140.9	141.0	141.2	141.4	141.6	141.5
115°	161.9	162.2	162.3	162.5	162.7	162.7	162.7	162.7	162.6	162.5	162.7
117.5°	182.4	182.6	182.9	183.2	183.4	183.6	183.8	183.9	184.0	184.2	184.2
120°	196.2	196.5	196.7	197.0	197.2	197.3	197.3	197.2	197.1	197.1	197.2
122.5°	209.1	209.3	209.5	209.6	209.8	209.9	209.9	210.0	210.1	210.3	210.3
125°	227.6	227.9	228.1	228.4	228.7	228.7	228.6	228.4	228.4	228.2	228.4
127.5°	245.2	245.2	245.2	245.3	245.4	245.6	245.9	246.1	246.5	246.8	246.7
130°	256.4	256.5	256.6	256.7	256.7	256.8	257.0	257.2	257.4	257.6	257.6
132.5°	266.8	266.9	267.0	267.2	267.3	267.4	267.7	267.9	268.2	268.4	268.5
135°	282.3	282.3	282.3	282.2	282.1	282.2	282.5	282.7	283.0	283.2	283.4
137.5°	296.1	296.2	296.2	296.2	296.3	296.4	296.7	296.9	297.3	297.5	297.7
140°	305.2	305.2	305.4	305.5	305.7	305.7	305.9	306.1	306.1	306.3	306.5
142.5°	313.2	313.4	313.6	313.9	314.1	314.3	314.4	314.5	314.5	314.6	314.7
145°	325.6	325.8	326.0	326.2	326.4	326.4	326.4	326.4	326.4	326.4	326.5
147.5°	335.4	335.8	336.1	336.6	336.9	337.0	337.0	336.9	336.8	336.8	336.8
150°	342.6	342.8	343.1	343.4	343.6	343.7	343.6	343.6	343.5	343.5	343.5
152.5°	348.6	348.8	349.0	349.2	349.4	349.4	349.4	349.2	349.1	349.0	349.1
155°	357.0	357.1	357.1	357.2	357.3	357.2	357.0	356.8	356.6	356.4	356.7
157.5°	364.1	364.0	364.0	363.9	363.9	363.8	363.6	363.4	363.1	363.0	363.3
160°	368.3	368.0	367.9	367.7	367.5	367.4	367.3	367.2	367.1	367.0	367.5
162.5°	371.9	371.7	371.5	371.2	371.0	370.8	370.7	370.6	370.6	370.6	371.0
165°	376.6	376.3	375.9	375.6	375.3	375.1	375.1	375.1	375.1	375.1	375.7
167.5°	380.3	379.9	379.6	379.3	379.0	378.8	378.7	378.7	378.6	378.6	379.2
170°	382.4	382.0	381.6	381.2	380.8	380.7	380.7	380.8	380.8	380.9	381.4
172.5°	383.8	383.4	382.9	382.6	382.2	382.0	382.1	382.2	382.2	382.3	382.8
175°	385.2	384.8	384.5	384.1	383.7	383.5	383.6	383.7	383.8	383.8	384.4
177.5°	386.0	385.6	385.2	384.8	384.5	384.3	384.5	384.6	384.7	384.7	385.2
180°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1128.4	1130.0	1131.7	1132.5	1132.4	1132.2	1132.0	1131.9
5°	1120.8	1122.7	1124.7	1125.4	1125.0	1124.7	1124.3	1123.9
7.5°	1105.9	1107.2	1108.4	1108.6	1108.1	1107.4	1106.9	1106.2
10°	1092.5	1093.2	1094.1	1094.1	1093.2	1092.5	1091.7	1091.0
12.5°	1076.0	1076.4	1076.8	1076.5	1075.5	1074.4	1073.3	1072.2
15°	1046.8	1046.4	1046.0	1045.2	1043.8	1042.4	1041.1	1039.8
17.5°	1011.8	1010.7	1009.6	1008.0	1006.0	1004.0	1001.9	999.9
20°	987.2	985.7	984.1	982.2	979.7	977.1	974.6	972.2
22.5°	960.1	957.7	955.4	953.2	951.2	949.2	947.1	945.1
25°	916.2	912.9	909.6	907.0	905.1	903.2	901.2	899.3
27.5°	871.4	867.4	863.3	859.9	857.1	854.4	851.6	848.8
30°	839.4	834.5	829.7	825.7	822.7	819.6	816.5	813.4
32.5°	806.6	801.0	795.4	791.2	788.2	785.3	782.4	779.4
35°	757.8	751.3	744.8	739.7	736.3	732.8	729.3	725.9
37.5°	705.5	698.1	690.8	685.4	682.0	678.5	675.1	671.6
40°	670.7	662.5	654.4	648.7	645.2	641.7	638.3	634.8
42.5°	636.3	628.1	619.9	613.9	610.3	606.7	603.1	599.4
45°	583.8	574.4	564.9	558.5	555.0	551.5	548.0	544.6
47.5°	530.9	521.1	511.4	504.5	500.8	496.9	493.1	489.3
50°	495.9	486.2	476.5	469.9	466.3	462.6	458.9	455.3
52.5°	460.9	451.1	441.2	434.5	430.6	426.8	423.1	419.2
55°	409.2	399.2	389.2	382.4	378.7	375.0	371.4	367.7
57.5°	358.8	348.6	338.4	332.0	329.2	326.4	323.7	320.9
60°	325.1	315.1	305.1	298.5	295.5	292.4	289.3	286.2
62.5°	292.0	282.7	273.5	267.6	265.1	262.7	260.2	257.7
65°	244.4	236.2	227.9	222.6	220.3	217.9	215.6	213.4
67.5°	200.8	193.7	186.5	181.7	179.2	176.6	174.1	171.5
70°	171.1	164.8	158.4	154.3	152.4	150.4	148.5	146.6
72.5°	144.6	139.1	133.6	130.0	128.3	126.5	124.7	122.9
75°	106.5	102.1	97.6	94.8	93.7	92.5	91.3	90.2
77.5°	75.3	72.7	70.1	68.6	68.3	68.0	67.7	67.3
80°	57.8	57.2	56.7	56.3	56.1	55.8	55.7	55.5
82.5°	44.9	44.5	44.1	43.8	43.6	43.4	43.2	43.0
85°	26.1	25.8	25.4	25.1	25.1	25.1	25.1	25.1
87.5°	10.8	10.8	10.7	10.8	10.9	11.1	11.3	11.4
90°	7.1	7.5	7.9	8.2	8.2	8.4	8.5	8.6
92.5°	6.8	7.3	7.7	7.8	7.9	7.9	7.9	8.0
95°	7.1	7.5	7.9	8.1	8.2	8.2	8.3	8.3
97.5°	7.7	7.7	7.7	7.8	7.9	7.9	8.0	8.1
100°	10.5	9.4	8.3	7.8	7.9	7.9	8.0	8.1
102.5°	37.6	25.8	14.1	8.2	8.2	8.2	8.3	8.3
105°	91.1	91.6	92.2	91.3	89.0	86.7	84.4	82.1
107.5°	112.7	112.9	113.2	113.5	113.7	114.0	114.2	114.5
110°	127.3	127.4	127.6	127.8	127.9	128.2	128.3	128.5





TEST NUMBER: P332928-930

CATALOG NUMBER: SA4XXRDIP-C795D365U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	141.5	141.5	141.5	141.6	141.9	142.1	142.4	142.6
115°	162.7	162.9	163.1	163.1	163.1	163.1	163.1	163.1
117.5°	184.1	184.1	184.1	184.0	184.0	184.0	184.0	183.9
120°	197.3	197.5	197.6	197.6	197.5	197.3	197.2	197.1
122.5°	210.3	210.4	210.5	210.5	210.3	210.3	210.1	210.0
125°	228.6	228.8	228.9	229.1	229.2	229.3	229.3	229.3
127.5°	246.7	246.6	246.6	246.5	246.5	246.5	246.4	246.4
130°	257.7	257.8	257.9	257.9	257.9	257.9	257.9	257.9
132.5°	268.6	268.6	268.7	268.7	268.6	268.6	268.6	268.5
135°	283.5	283.6	283.7	283.9	284.0	284.1	284.3	284.4
137.5°	297.8	298.0	298.1	298.2	298.1	298.1	298.0	298.0
140°	306.6	306.9	307.0	307.2	307.3	307.3	307.4	307.4
142.5°	314.9	315.0	315.1	315.2	315.3	315.3	315.3	315.3
145°	326.6	326.7	326.7	326.8	326.9	327.1	327.2	327.3
147.5°	336.9	337.0	337.0	337.0	337.1	337.1	337.2	337.3
150°	343.5	343.5	343.5	343.5	343.6	343.6	343.6	343.7
152.5°	349.2	349.3	349.4	349.4	349.4	349.4	349.4	349.3
155°	356.9	357.2	357.4	357.5	357.3	357.1	356.9	356.7
157.5°	363.6	363.9	364.3	364.3	363.9	363.6	363.3	363.0
160°	367.9	368.3	368.6	368.6	368.3	367.9	367.5	367.0
162.5°	371.3	371.7	372.1	372.0	371.6	371.2	370.7	370.3
165°	376.2	376.7	377.2	377.2	376.6	376.0	375.4	374.9
167.5°	379.8	380.3	380.8	380.8	380.2	379.5	378.9	378.3
170°	382.0	382.5	382.9	382.9	382.3	381.6	381.0	380.3
172.5°	383.4	383.8	384.3	384.3	383.6	382.9	382.2	381.5
175°	385.0	385.6	386.1	386.0	385.2	384.5	383.7	382.9
177.5°	385.6	386.0	386.5	386.3	385.7	385.1	384.5	383.8
180°	385.2	385.2	385.2	385.2	385.2	385.2	385.2	385.2

(END OF REPORT)